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JP08218855

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Application Date : August 20, 1996 Patent: 10060480

Int. Class Number : C11D 3/37, 10/02, 17/08;

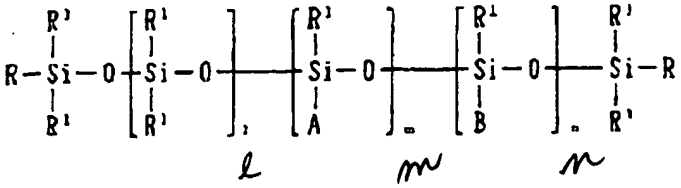
//(C11D 10/02, 1:72)

Patentee : Kao Corp

Title: Liquid detergent composition

Claims:

1. A liquid detergent composition comprising (a) from 0.05 to 5% by weight of an amino-modified silicone(シリ) derivative represented by the following general formula (I) and (b) from 5 to 70% by weight of a surfactant containing from 95 to 75% by weight of the following nonionic surfactant (i) and from 5 to 15% by weight of the following nonionic surfactant (ii), wherein the weight ratio of (a):(b) is from 1 :100 to 1:5.



(I)

l m n

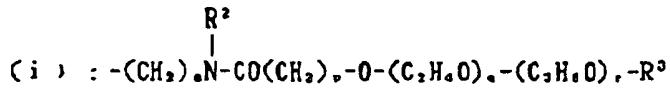
(wherein

ℓ is from 100 to 600, m and n are such numbers as satisfying l:m = 100:1 to 10:1 and m:n = 1:10 to 10:1,

R represents an alkyl group, a hydroxy group or an alkoxy group of from 1 to 4 carbon atoms,

R^1 each represents an alkyl group of from 1 to 4 carbon atoms, which may be different from each other,

A represents a group represented by the group (i) or represented by groups (i) and (ii) described below, and the ratio of (ii) in A is 50 mol% or less in the latter case,



(i) : $-(CH_2)_a\overset{R^2}{\underset{|}{N}}-CO(CH_2)_p-O-(C_2H_4O)_q-(C_3H_6O)_r-R^3$

(ii) : $-(CH_2)_a\overset{R^2}{\underset{|}{N}}-H$

wherein

a is from 2 to 6,

R^2 represents a hydrogen atom or an alkyl group of from 1 to 4 carbon atoms,

p is from 1 to 6,

q is from 1 to 20,

r is from 0 to 20,

R^3 represents an alkyl group of from 1 to 18 carbon atoms,

B represents $-(CH_2)_a-O-(C_2H_4O)_x-(C_3H_6O)_y-R^4$ or R^1,

R^4 represents an alkyl group of from 1 to 10 carbon atoms,

x is from 1 to 20, and

y is from 0 to 20.

< nonionic surfactant (i) > nonionic surfactant represented by the following general formula (i):

$$R_1O(R_2O)_nR_3 \qquad (i)$$

(wherein R_1 represents a linear or branched alkyl or alkenyl group of from 8 to 18 carbon atoms, or an alkylphenyl group of from 12 to 22 carbon atoms in total, R_2 represents an alkylene group of from 2 to 4 carbon atoms, R_3 represents hydrogen, a methyl or ethyl group, n is an addition mol number of alkylene oxide added so that the HLB value ranges from 12 to 15).

< nonioic surfactant (ii)>

a nonionic surfactant represented by the following general formula (ii), having an HLB value of from 7 to 10, and a content of a compound where n = 0 of 4% by weight or less, with an addition mol number of the compound of the greatest content n_{max} satisfying the following formula (A):

$$R_4O(CH_2CH_2O)_nR_5 \qquad (ii)$$

(wherein R_4 represents a linear or branched alkyl or alkenyl group of from 8 to 18 carbon atoms in average or an alkylphenyl group of from 12 to 22 carbon atoms in total, R_5 represents hydrogen or a methyl group, n is an addition mol number of ethylene oxide added so that the HLB value ranges from 7 to 10).

$$\sum_{i=n_{max}-2}^{i=n_{max}+2} Y_i \geq 60\% \cdots (A)$$

2. A liquid detergent composition as defined in claim 1, wherein from 0.1 to 10 parts by weight of a polycarboxylic acid type oligomer which has an average molecular weight of from 500 to 100,000 and a portion of which may be in the form of a salt is blended based on 100 parts by weight of the surfactant (b).

3. A liquid detergent composition as defined in claim 1 or 2, which contains water as a main medium, and has a pH of from 6 to 8.

-2- (WPAT)
AN - 98-213130/19
XRAM- C98-067629
TI - Liquid cleaner compsn.. - contains an amine-modified silicone deriv.
DC - A97 D25
PA - (KAOS) KAO CORP
PR - 96.08.20 96JP-218855
NUM - 1 patent(s) 1 country(s)
PN -- JP10060480 A 98.03.03 * (9819) 10p C11D-003/37
AP -- 96JP-218855 96.08.20
IC1 - C11D-003/37
IC2 - C11D-010/02 C11D-017/08
ICL - C11D-001:72 C11D-001:722 C11D-003:20 C11D-003:37 C11D-010/02
AB - JP10060480 A
The compsn. contains (a) 0.05-5 wt. % an amine-modified silicone deriv. of formula (I), (b)5-75 wt. % a mixt. of (i) 95-75 wt. % (8-18C alkyl-, alkenyl- or 12-22C alkylphenyl)-poly(oxy-2-4C alkylene) or its methyl- or ethyl-ether with a HLB value of 12-15 and (ii) 5-15 wt. % a similar poly(oxyethylene) or methyl- or ethyl-ether with a HLB value of 7-10, contg. 4 wt. % or less of monomeric ethers and 60 wt. % or more of polyethers within plus or minus 2 of the max. distribution of mol. addition of ethyleneoxide, where the wt. ratio of (a)/(b) of 1/100 - 1/5. l = 100-600; l/m = 100/1-10/1; m/n = 1/10 - 10/1; R = 1-4C alkyl, OH or alkoxy; R2 = 1-4C alkyl; A = 1-18C alkyl-poly(oxypropylene-oxyethylene)oxy-polymethylenecarboxy-(H or 1-4C alkyl)amido-polymethylene- with/or without (H or 1-4C alkyl)amino-polymethylene-; B = 1-4C alkyl or 1-10C alkyl-poly(oxypropylene-oxyethylene)oxy-polymethylene-. Also claimed is an aq. soln. of the compsn. with pH of 6-8.

USE - The cleaner for wool, acrylic fibres, polyesters or their mixed fabrics.

ADVANTAGE - The compsn. shows the improved storage stability and gives fabrics the prevention of shrinkage, the good penetration of detergent soln. and the improved finish feeling. (Dwg.0/0)

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(19) JAPANESE PATENT OFFICE

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(71) Applicant: **FUJIE:KK**

(72) Inventor: **FUJIE HIDEKI**

(54) NET BAG FOR WASHING SWEATER

(57) Abstract

PROBLEM TO BE SOLVED: To provide a washing net bag special for t sweater used at the time of washing sweater with a washing machine, which is good in the damage preventing effect and shape retention effect for sweater and also can be used as it is for drying.

SOLUTION: A belt-like sleeve holder 2 is disposed with only one end thereof sewn in a flat net bag main body 1 capable of storing the body part A1 of a sweater A in spread state, the sleeve part A2 of the sweater A stored in the net bag main body 1 is interposed inside two-folded sleeve holder 2 and held in a locking state, thereby preventing shifting of the sweater in the bag main body.